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CAPITAL IMPROVEMENTS PROGRAMMING FOR LOCAL GOVERNMENTS

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PREPARED FOR
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PROTECTION AGENCY

JULY 1975

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CAPITAL IMPROVEMENTS PROGRAMMING FOR LOCAL GOVERNMENTS

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PREFACE

Providing public services while staying within the constraints of limited financial resources is a problem which faces small and large communities alike. Of particular concern to local residents and officials are the planning and improvement of public facilities for water supply, sewage treatment, drainage and flood control, parks and recreation, transportation, housing, health care, education, and other community facilities.

One financial management technique to aid in the planning of community facilities is capital improvement programming. By looking beyond year-to-year budgeting in order to determine what, when, where, and how future improvements shouls be made, capital improvement programming enables officials to avoid the exhausting impact that unplanned capital expenditures often have on local resources.

This manual has two purposes: (1) to familiarize local government officials with the concept of capital improvement programming, and (2) to describe procedures that may be followed in the preparation, adoption, and use of such a technique.

The manual was prepared as a general introduction to capital improvement programming by John M. Gunyou, staff economist. It represents an attempt to centralize a wide variety of information on capital improvement programming for the use of local officials. The collection of material included in this manual reflects the efforts of many individuals and agencies. The contributions used from these sources are credited in the Bibliography section of the manual.

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I. AN INTRODUCTION TO CAPITAL IMPROVEMENTS PROGRAMMING

A. WHAT IS CAPITAL IMPROVEMENTS PROGRAMMING?

Capital improvements programming is the preparation and updating of a proposed schedule of public works and related equipment to be built or purchased by local governments during the next few years. It covers the community's entire range of public facility and service requirements. In the program, all future projects are listed in order of construction priority, together with cost estimates and the anticipated means of financing each project.

The capital improvements program is generally based on the locality's comprehensive plan. In the absence of such a plan, however, it is based on community objectives as defined by the local government and upon proposals submitted by various officials and departments. The land acquisition and construction activities of all neighboring and overlapping jurisdictions (municipalities, counties, special districts, authorities, and even the State) should also be included, or at least considered in the capital improvements program whenever possible.

A five to six year programming period is generally considered to be most suitable. Two or three years is too short for effective programming because planning and financing of major facilities usually take a longer period of time. Conversely, a period of seven or more years may project the program too far into the future to be of practical value.

"Capital improvements" are major projects requiring the expenditure of public funds, over and above annual operating expenses, for the purchase, construction, or replacement of the physical assets of the community. The purchase of land needed for community use is a capital improvement, as is the acquisition or construction of facilities, such as:

Airport	Library	Sewage Treatment Plant
City Hall	Park	Sewer System
Civic Center	Parking Garage	Street Improvements
Courthouse	Playground	Water System
Drainage System	Police Station	Water Treatment Plant
Fire Station	Public Housing	
Hospital	Sanitary Landfill	

B. WHAT ARE THE BENEFITS OF CAPITAL IMPROVEMENTS PROGRAMMING?

Considerable benefits may be derived from a systematic approach to planning capital projects. Some of the most important advantages of capital improvement programming are the following:

- Focusing Attention on Community Goals, Needs, and Capabilities. Capital projects can be brought into line with community objectives, anticipated growth, and financial capabilities. By planning ahead for projects, those that are needed or desired the most will be constructed first.

- Achieving Optimum Use of the Taxpayer's Dollar. Advance programming of public works on an orderly basis will help avoid the possibility of costly mistakes. The program will guide local officials in making sound annual budget decisions. In addition, a listing of anticipated future construction projects may encourage the selection of needed land well in advance of actual construction, and then permit acquisition at lower costs.

- Serving Wider Community Interests. The capital improvements program, once accepted, keeps the public informed about future construction plans of the community and helps reduce the pressures on local officials for projects far down on the priority list. In addition, knowledge about the future physical needs of the community and the financial ability of the local government to fulfill these needs is a valuable aid to private investors.

- Encouraging a More Efficient Governmental Administration. Coordination of capital improvements programming by the agencies of a city, or a county, can reduce scheduling problems conflicting and overlapping projects, and overemphasis of any governmental function. In addition, work can be more effectively scheduled and available personnel and equipment better used when it is known in advance what, where, and when projects are to be undertaken.

- Improving the Basis for Intergovernmental and Regional Cooperation. Capital improvements programming offers public officials of all governmental units (city, county, and special district) an opportunity to plan the location, timing, and financing of needed improvements in the interest of the community as a whole. Furthermore, because many public works services and facilities do not stop at the city or county boundaries, adequate

planning and cooperation by the various agencies and governments through a capital improvements program could help reduce duplication of effort and the cost of such projects, and avoid public inconveniences.

- Maintaining a Sound and Stable Financial Program. Sharp changes in the tax structure and bonded indebtedness may be avoided when the projects to be constructed are spaced over a number of years. Where there is ample time for planning, the most economical means of financing each project can be selected in advance. Keeping planned projects within the financial capacity of the community helps to preserve its credit rating and makes the area more attractive to business and industry.

- Enhancing Opportunities for Participation in Federal or State Grant-In-Aid Programs. There are many Federal and State programs that a local government may draw upon for planning, construction, and financing capital improvements. The preparation of a capital program improves the local government's chance of obtaining such aid.

C. WHAT IS THE ROLE OF CAPITAL IMPROVEMENTS PROGRAMMING IN COMMUNITY PLANNING AND MANAGEMENT?

A local government's capital improvements program affects and is affected by both internal activities, such as budgeting and planning, and external relationships with overlapping and neighboring jurisdictions.

- Annual Capital Budgeting. Local governments that already have an annual capital budget, or are in the process of developing such a budget, will note similarities between the capital budget and the capital improvements program immediately. In the preparation of both documents, information is collected from the various operating departments and financial officials, combined into a document of proposed expenditures under the direction of the chief administrator, and submitted to the governing body for final consideration and adoption. The only significant differences between the annual budget and improvements program is that the latter involves projections for several years into the future, as opposed to a one-year period, and should take into account the capital projects of other governmental units in the area. Once the capital improvements program is adopted, the relationship between the

two budgets should be evident, for the first year of the capital improvements program should result in the preparation of the annual capital budget. Capital improvements programming thus becomes a continuing part of the local government's budgeting and management procedure.

- Fiscal Capacity. A realistic capital improvements program is related to fiscal capacity. Programming requires the gathering of financial data so that the program may be related to the financial capabilities of the community.

  Knowledge of past experience and an awareness of trends in taxation, assessment, and public expenditures for the local government and for other units of comparable size and fiscal capacity are essential for the development and evaluation of a capital improvements program. Consideration must be given to State-imposed debt limits, per capita income and expenditures, and the long-term impact of the various capital projects on both the capital and the operating budget of the local government.

- Long-Range Planning. Capital improvements programming should be based on long-range physical planning and financial projections. Many communities have prepared a "comprehensive" or "master" plan for the future physical development of the community. Primary objectives of these plans are (1) to identify and analyze the major forces that might influence the growth and change of the community, (2) to set realistic goals for the future development of the community, and (3) to establish requirements for public facilities. A capital improvements program, like zoning and subdivision control, is a means of implementing the comprehensive plan.

  Where a comprehensive physical development plan exists, the basic facts and projections needed for sound capital improvements programming are readily available. The plan will provide criteria to guide decisions on project selection and the assignment of priorities. Where such planning has not yet been undertaken, land-use, population, and related studies should be made.

  It is not necessary to have a comprehensive physical development plan or a long-range financial plan before programming can begin. However, local governments that already possess such information will have a head start in the programming process.

- Other Governmental Units Serving the Area. One of the benefits of capital improvements programming is that it affords a basis for bringing order out of the complex relationships that exist among neighboring and overlapping units of local government. In many cases the local government will have to deal with special authorities and special districts with the authority to finance their activities through revenue bonds backed by user charges. Although each city, county, or special didstrict may develop its own capital improvements program, there is a growing recognition that on such matters as streets, highways, schools, parks, and water and sewer facilities there is a need to coordinate planning among all the agencies which are affected by a capital project.

  A capital program should, to the greatest possible extent, include references to capital facilities planned by other governmental units serving the community. An exchange of information will help avoid duplication and waste in the services provided to the entire community.

  Planners in a local government should be aware of what other governmental units and planning bodies are doing, and propose to do, and thus develop their own program accordingly. Presently, the coordination of capital improvements plans for the region as a whole depends on voluntary and informal agreements between various units of government. A more formal structure of coordination among all governmental and planning units providing services within the region might be established through the Denver Regional Council of Governments.

II. THE PREPARATION OF A CAPITAL IMPROVEMENT PROGRAM

A. WHO PARTICIPATES IN THE PROGRAMMING PROCESS?

Assignment of responsibilities for capital improvements programming varies from community to community, depending upon the form of government, level of staffing, and other local conditions. Below are listed some of the main participants in the programming process and a description of their activities:

- Chief Executive. The Chief Executive (mayor, city manager, or county manager) usually assumes the major administrative responsibility for development of the program. He is involved in the formulation of the capital improvements policy and may recommend projects for inclusion of the program.

  The degree to which the Chief Executive participates in programming depends to a great extent upon local government structure and the legal assignment of powers made by statute, charter, and ordinance. For example, the role of the Chief Executive will vary substantially among council-manager, commission, weak mayor-council, and strong mayor-council forms of city government. Frequently, the Chief Executive serves as a link between the Program Administrator and the Governing Body. In this capacity he keeps the Governing Body abreast of programming developments, and relates the views of the Governing Body to the Program Administrator.

- Planning Agency. When such a staff is available, the task of preparing the capital improvements program may be assigned to the local Planning Agency, although ultimate responsibility is vested in the Chief Executive. The Planning Agency is in a unique position to perform this role because it regularly monitors information relative to development on a community-wide basis. Land use information and plans for the future development of a community form the basis for capital expenditure programming. Because one of the Planning Agency's responsibilities is to set forth basic goals and guidelines for the future development of the city or the county, it is ideally suited to serve in a coordinating capacity.

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- Program Coordinator. The task of preparing the capital improvements program may be assigned to an Interdepartmental Committee composed of key staff personnel from finance, budgeting, and public works departments if the local government does not have a Planning Agency or if the Planning Agency is not staffed to perform the coordinating role required for capital improvement program preparation. Under other local conditions, the program may be prepared by a Special Committee of the Council composed, perhaps, of the chairmen of public works, finance, and other committees with an interest in the program and representatives of various key departments. In this guide, the individual or body charged with these responsibilities is called the "Program Coordinator."

  The Program Coordinator must develop working procedures with department heads and other officials in the city or county who will be involved in the process and, where appropriate, with other governmental units and planning bodies in the area. He must have certain facts at his disposal. The most important of these are: (1) a complete inventory of the kinds of existing facilities and their condition, (2) knowledge of existing policies for the future physical development of the community, and (3) basic data concerning the ability of the community to pay for planned improvements.

- Operating Departments. The primary responsibility of the Operating Departments in the programming process is to initiate project requests. These requests are prepared on standard forms on which information is provided relative to why various projects are needed and how the projects relate to the Departments' other programs and long-range aspirations.

- Finance Officer. The Finance Officer is responsible for: (1) the financial analysis and projections needed as a background for capital improvements programming, (2) a review of both the capital and operating budget implications of individual project requests, and (3) determining the best possible means of financing each project among alternative methods. If the Finance Department functions as a one-man operation or if the staff is too small to assume the additional burdens of these tasks, the Planning Agency may be used to gather much of the needed financial data.

- Governing Body. The locality's legislative body should participate in the establishment of goals and procedures for capital improvements programming. Ultimate responsibility for the adoption, modification, or rejection of the program lies in the Governing Body. Individual representatives of the legislative body may also become directly involved in the preparation of the program as members of the Planning Commission or a Special Capital Improvements Committee.

  Capital improvements programming usually is most successful when it has been made mandatory. The Council and Chief Executive should assign specific responsibilities for annual preparation of the program, establish general policy and procedures to be followed, and provide a schedule for completion of the various stages. These may be formalized in the city or county charter, administrative budget calendar, or by ordinance or resolution.

- Citizens Advisory Committee. A Citizen Committee, representing the community as a whole, may be established to assist in developing the overall program. Such a group can be particularly helpful in getting public support for bond issues needed to put various aspects of the program into effect. Usually appointed by the Chief Executive, the Advisory Committee may include representatives of civic, business, labor, and other organizations.

- Consultants. Lacking skilled personnel, small communities often seek the help of consultants in developing capital improvements programs. When the local government must undertake large-scale public works projects, a professional planner, engineer, or architect may also be called in for technical assistance. Consultants should be required to work within the framework of established community goals and under the direction of responsible local officials.

  It should be recognized, however, that the objective of this manual is to recommend guidelines and procedures for preparation of a CIP with the available staff of the local government. In nearly all cases, in-house preparation of a Capital Improvement Program should be possible.

B. WHAT ARE THE MAJOR STEPS IN PROGRAMMING?

The major steps in the programming process are: (1) submission of proposed capital improvements projects to the program coordinator, (2) review and selection of projects for inclusion in the program in order of their priority, (3) financial analysis of both the community's ability to pay for the projects and means to be used in financing them, (4) preparation of a tentative program, (5) consideration and final approval of the program by the governing body, (6) public approval of financing arrangements for individual projects, and (7) annual review and revision of the program. A summary discussion of these steps is presented below:

(1) Submission of Project Proposals. The responsibility for proposing projects for the capital improvements program usually rests with the local government's operating departments. In some localities citizen organizations, church groups, charitable organizations, local chambers of commerce, union groups, and others have been invited to participate in this activity. Project proposals may also be initiated by the chief executive or members of the city or county council.

Each department prepares a list, in order of priority, of capital projects believed to be needed or desirable within the next several years. Guidance should come from the chief executive on criteria to be used in evaluating projects and the general development goals of the community. The project proposals should then be submitted according to a pre-determined schedule to the individual or agency (the chief executive, planning agency, special committee) serving as the program coordinator.

The program coordinator supplies each operating department, agency, organization, or individual with forms on which proposed projects are to be submitted and furnishes appropriate instructions for their use. Sample forms are provided in Appendix A.

Certain information should be provided for analysis in the later stages of the programming process for each project submitted.

- Name, description, location, and purpose of the project.

- Estimated costs involved in each project, including planning, land, construction, equipment and other related costs;

- Impact of the new projects on operating costs and revenue, including estimated annual costs of maintenance, additional personnel, and allied equipment needs, as well as anticipated revenue-producing potential of the project;

- Scheduling of construction phases and project expenditures;

- Justification and priority of the project;

- Recommendations on how the project is to be financed, including any available grants from the State or the Federal government;

- Current status of the project, indicating preliminary planning, engineering, acquisition, construction

Each department might develop a long-term capital improvements plan of its own, as far as 20 years ahead for some functions, to support its justification of proposed projects and to relate proposals to one another. The functional plans prepared by each operating department should be incorporated into the comprehensive physical development plan of the entire community.

In the absence of such a plan, a thorough inventory of existing facilities and services, an evaluation of their adequacy, and a statement of departmental objectives and priorities should be formulated. Without this type of information, projects listed may represent merely wishful thinking on the part of the various department heads or may simply reflect the pressures of certain groups for pet projects.

The departmental project requests should then be transmitted to the program coordinator when completed.

(2) Determination of Priorities. After the list of capital improvement needs has been received from each of the departments, the program coordinator may arrive at tentative priorities by classifying each project according to an established set of priority criteria. A suggested method of accomplishing this task is contained in Appendix B.

(3) Financial Analysis. The preparation of a financial analysis involves a determination of the community's ability to pay for the capital improvements, as well as the means to be used in financing them.

In order to determine a community's ability to pay for capital improvements, several tasks must be accomplished:

- Analysis and Forecast of Revenues
- Analysis and Forecast of Expenditures
- Determination of Net Cash Flow

Recommendations for procedures to accomplish these tasks are contained in Appendix C.

The finance or budget officer must also determine the feasibility of the alternative means by which the various proposed projects could be financed. Possible methods of financing include pay-as-you-go, lease-purchase, and borrowing. These and other possible alternative methods of financing capital projects are summarized in Appendix D.

(4) Preparation of a Draft Program. A draft of the proposed improvement program should be prepared by the program coordinator after the list of capital improvement needs has been evaluated and the financial analysis has been completed. With such information, the program coordinator will be better prepared to develop a long-range program that will be acceptable to the local governing body.

The program coordinator's report should contain at least the following items: (1) a list of projects and the proposed timing of their construction; (2) a description and justification of each project; (3) financial data on the capital cost of the projects, source of funds with which each project is to be financed, estimates of the resulting maintenance and operation costs, and the anticipated effect of the program upon the tax rate and indebtedness of the community. Projects recommended for the first year of the program should be presented in the greatest detail because such detail will be used as a basis for the current capital budget. In addition, the text of a capital improvements program may be effectively supplemented by maps showing the location of proposed and existing facilities, progress photos, and other visual displays.

(5) Review and Adoption of the Program. The draft of the proposed capital improvements program is then transmitted to the legislative body, together with recommendations by the chief executive. Where the program coordinator is independent of the chief executive, the proposed program may be submitted directly to the governing body. If the planning agency has not

acted as program coordinator, it should be given a copy of the proposed program for review. This should be done to keep the capital improvements program and the long-range comprehensive community development plan in harmony.

The submission of the proposed program to the governing body, either by the chief executive or the program coordinator, should be followed by public hearings at which all interested citizens and civic groups may express their views. Department heads and the program coordinator may also be called upon to explain certain aspects of the program at such meetings.

After the public hearings, and possibly after further consultations with members of the executive branch, the council may decide to cancel, modify, or reschedule certain projects, or add new projects. It may also wish to phase a project over a period of years. However, radical revision is less likely if the program has been carefully prepared.

The entire capital improvements program should be adopted by resolution or ordinance. The first year of the program should be used to make up the current capital budget. It can either be extracted and separately adopted as the capital budget or its projects may be incorporated within the regular annual budget.

The projects assigned to the remaining years of the program represent a legislative declaration of intent and facilitate the advance purchase of land and planning of financial resources. The remaining years may also be used as a means of signifying the manner in which certain projects continuing beyond one year are to be executed.

(6) Public Approval. No matter how well the program has been prepared or how carefully it has been weighed and considered by the council, public approval and acceptance are vital to its success. This is especially true when a referendum must be held to authorize bond issues needed to finance the program. To this end, it is expecially important that the public be kept fully informed about the program as it develops and the benefits it will produce. If all the explanations are left until the time for submission of a proposed bond issue to the public for vote, the issue may be defeated and the program delayed because of confused or inadequate public understanding.

Various methods of securing public confidence and understanding have been used. Newspaper articles, radio discussions, pamphlets accompanying tax bills and receipts, speeches to civic organizations, and public forums have all been effective. In some communities, citizen advisory committees and civic organizations have been of great assistance in promoting public acceptance of the program and in securing necessary consent for its funding. Often such groups have been active in the development and review of the program.

(7) Annual Revision. The capital improvements program should be reviewed, revised, and extended on an annual basis. The program must be flexible. Revision is necessary to take account of changing needs and financial resources. Furthermore, annual revision gives new public officials, either elective or administrative, an opportunity to present their views with respect to what should be done and when.

A progress and performance report should be prepared annually by the individual departments for each project authorized in the past capital budget period to bring the program up to date. A final accounting should be provided for projects completed and progress reports should be submitted for projects that will take a number of years to complete. These reports will be of invaluable assistance to both the program coordinator and the governing body. The information can be used to plan for similar project requests and to make recommendations about whether the remaining projects should be continued, revised, or eliminated.

Annual review and revision of the capital improvements program assures that the process will become a continuing part of the local government budgeting procedure. Such a review optimizes the likelihood that the program will be consistent with changing demands as well as changing patterns of cost, and that the community will always have a current view of its projected needs.

TECHNICAL APPENDICES

A. PROJECT DESCRIPTION FORMS

B. PROJECT PRIORITY CRITERIA

C. FINANCIAL ANALYSIS METHODOLOGY

D. ALTERNATIVE FINANCING METHODS

PROJECT DESCRIPTION FORMS

INTRODUCTION

Enclosed are the forms to be filled out by each department covering capital construction projects which are proposed for the City's Capital Improvement Program and Annual Capital Improvement Budget. These forms should be filled out and returned as promptly as possible and should be in the office of the CIP Program Director no later than _____. A complete time schedule has been enclosed for your information.

If you recommend improvements not directly in compliance with the City Plan, or propose projects for purposes which are not included in the plan, your request for capital funds should be accompanied by a recommendation that the plan be changed or expanded to include such improvements.

DEFINITIONS

The following definitions are presented to distinguish between several terms included in the instructions:

- Capital Improvement Project. Capital expenditures are commonly defined as expenditures which result in the acquisition of or additions to fixed assets, such as land, buildings, facilities, and major equipment.

- Capital Improvement Budget. A list of projects, together with the amounts and sources of funds for the coming fiscal year, regarded as the first year of the capital improvement program. The Capital Improvement Budget is included with the Operating Budget in the City's Budget Document.

- Capital Improvement Program. A long-range schedule of proposed projects with their estimated costs and sources of funds over a period of the next five years on a fiscal year basis. The program is updated annually for the purpose of confirming or reorganizing projects on a priority basis, and to prepare the next fiscal year's capital improvement budget.

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INSTRUCTIONS

A Project Description Form should be prepared for each capital project request according to the following instructions:

- Title. Brief one-line title of proposed project.

- Functional Area. Assignment of project to one designated category, such as:

  Water
  Wastewater
  Drainage
  Parks
  Transportation
  Housing
  Public Buildings
  Other

- Jurisdiction. Department responsible for initiation of project request.

- Location. Specific location of projects in non-technical terms. (Use of a standardized city map may also be useful in the location of the project.)

- Description. Narrative description of project including a statement of consistency with the city comprehensive plan.

- Justification. Information which explains the motivation for the project. Such information may include the purpose, history, and rationale for the project. Statements may also be included which identify the extent that the project alleviates present inadequacies, serves a major portion of the population, benefits the environment, health or safety of the area, and reflects a good cost/benefit relationship. The Justification Section should also include some statement of the relative priority of the project as determined by the department.

- Present Status. The current status of approval and commitment to the project. The information should include some statement concerning the status of:

  Studies/Surveys
  Preliminary Plans
  Final Plans
  Land/R.O.W. Acquisition

Construction
Improvement/Development

- Cost. Staged cost estimate in thousands of current dollars.

- Funding Sources. Sources of funding, including an indication of presently committed funds in thousands of current dollars.

- Future Operating Budget Impact. Estimate of future annual operating costs associated with the proposed project in thousands of current dollars.

DENVER REGIONAL COUNCIL OF GOVERNMENTS
REGIONAL IMPROVEMENT PROGRAM
PROJECT DESCRIPTION

TITLE	FUNTIONAL AREA
LOCATION	JURISDICTION

)ESCRIPTION

JUSTIFICATION

PRESENT STATUS

COST (000's)	Prior	1974	1975	1976	1977	1978	1979	1980	Future	TOTAL
Planning/Design										
Land Acquisition										
Construction										
Other										
TOTAL										

FUNDING SOURCES

	Committed	TOTAL
Local		
Other (Specify)		
TOTAL		

FUTURE OPERATING BUDGET IMPACT

Personnel	
Operating/Maintenance	
Other	
TOTAL ANNUAL IMPACT	

ADDITIONAL COMMENTS

PROJECT PRIORITY CRITERIA

INTRODUCTION

This appendix contains an example priority criteria system to be used in establishing a relative ranking of the proposed capital improvements.

A priority ranking process is often developed from the guidelines of a comprehensive plan. A comprehensive plan integrates the various functional areas of the city and establishes goals, objectives, and policies. This appendix proposes only suggested criteria and one possible system for ranking projects. Any actual system would require further refinement, adaptation, and ultimate approval at the policy level.

Each capital improvement project request is evaluated on the basis of a set of priority considerations. The results are used as the basis for a final determination of the relative importance of each project.

A Project Priority Form is completed for each capital project request. Often some measure of inter-departmental cooperation is used in the preparation of such forms. The respective departments may initially complete the forms, and then some inter-departmental management group may jointly prepare a similar set of forms on the same projects. Another possible approach would involve preparation of the forms by the CIP program coordinator, followed by departmental review.

INSTRUCTIONS

Points are assigned to each project according to the extent that the project satisfies each of the priority criteria:

2 Points	Very important, highly relevant, has a strong impact on the project.
1 Point	Important, relevant, has some impact.
0 Points	No importance, not relevant, has no impact on the project.

Once a point assignment has been made for each of the criteria, the points are totaled to arrive at the relative priority for the project. Some mention might also be made of the facts relating to the assignment of

points by describing the various factors relating to the consideration. This may be included on the form, following the appropriate criteria.

DEFINITIONS

The following definitions of the criteria should be used when the point assignments are made:

- Comprehensive Plan. Consistency with the City's Comprehensive Plans and Programs. Some projects may directly implement, or facilitate, the development of the City's Comprehensive Plan. Projects which adversely affect the plan, or which do nothing to actively implement the Plan, would be rated 0.

  What is the relationship of the project to the progress of the entire city?

- Need. Alleviates identified problems or deficiencies. Projects which would serve only projected developments would be rated 0, while projects serving existing deficiencies or problems would be rated 2.

- Extent of Service. Service to a major segment of the population of the city. How many citizens would be harmed or inconvenienced if the project were not constructed?

- Public Support. Technical and political backing of the project. Some projects are suggested by, or even demanded by local citizens. Such public support should be considered in terms of its strength, depth of understanding, and degree of activity.

  Is the project well-identified by the citizenry? Does it have established voter appeal?

- Public Health or Safety. Benefit to the environment, safety, and public health, This consideration might only be used where public health or safety is a critical factor; a matter of necessity rather than a matter of choice. For example, all street projects concern public safety; but this consideration would be used only when urgent; continual safety hazards, however, make a specific street project virtually mandatory.

  Is the project needed to protect public health or safety?

- Efficiency of Service. Cost/benefit relationship. This consideration includes those projects which result in significant savings to the City by eliminating obsolete or inefficient facilities, or projects which improve substantially the quality of service to the public.

  Will it increase the efficiency of the performance of a service? Will it reduce the on-going costs of a service or facility?

- Related Projects. Many projects in one category are essential to the success of projects in other categories. In some instances, significant Federal or State grants will be involved, and the City may be required to provide its matching share or forfeit the grant. Related projects by other agencies may affect a savings which must be pursued. Any regional projects, or City projects of regional significance would be referenced here.

  Is this project part of a larger program? How does the project relate to the goals of the program?

  Is this project required to complete or make fully usable a major public improvement?

- Legal Requirement. Many Federal and State grants are contingent upon local participation, and such inter-governmental agreements are legal requirements which must be honored. Court orders and judgements concerning annexation, property-owner rights, environmental protection, etc. are also legal requirements which may affect a project.

- Economic Impact. Effect of the project on the local economy.

  Will it add to the value of the surrounding area? Will it increase the valuations of local property?

  Will rapid urban growth in the area of the proposed project increase the costs of land acquisition if the project is deferred?

  Will it provide a service required for economic development of the community? What improvements would be of the most value in attracting commercial and industrial firms?

CAPITAL IMPROVEMENT PROGRAM

PROJECT PRIORITY FORM

PROJECT:

PRIORITY CRITERIA	SUPPORTING FACTS	POINTS*
Comprehensive Plan		
Need		
Extent of Service		
Public Support		
Public Health or Safety		
Efficiency of Service		
Related Projects		
Legal Requirement		
Economic Impact		
TOTAL		

* 2 Points Very important and highly relevant.
1 Point Important and relevant.
0 Points No importance and not relevant.

FINANCIAL ANALYSIS METHODOLOGY

INTRODUCTION

Financial analysis is an integral part of the capital improvement programming process. Financial capacity is an important criterion to use in measuring the feasibility of a capital program. While financial capacity is not the only criterion, the capital programming process would be incomplete without an analysis of the municipality's expected financial capacity.

The purpose of this appendix is to present a methodology by which municipalities can analyze, from a financial point of view, their ability to pay for the capital projects in their capital budget and program. The recommended methodology is only one of a number of alternatives. The method has been selected on the basis of the availability of data. The alternative methods generally require computing facilities to be feasible. Until those facilities are available at a reasonable cost, and until the data requirements are met, the method outlined here seems to be the best alternative to municipalities. A more sophistocated methodology would use a similar approach, but would employ the use of more advanced estimation techniques.

This appendix contains several sections:

- Methodology
- Analysis of Revenue
- Analysis of Expenditures
- Determination of Growth Rates
- Determination of Net Cash Flow
- Analysis of Funds Sources

I. METHODOLOGY

Financial resources are relatively easy to estimate with a high degree of accuracy for near-term budgets. The amount available for the operating budget, for example, is a relatively easy figure to determine. For the annual capital budget, the same holds true. For these two aspects of the budgeting process, the city officials are familiar with the means available to assess financial capacity for meeting near-term commitments. The third aspect of budgeting, capital programming, presents a problem. The capital program includes capital projects to which a city expects to make a commitment of funds.

Financial projection is part of the capital programming process. It is also a tool for analyzing alternate fiscal policies. Financial projection can be, and should be, used to test the effect of alternate levels of debt and tax income used to finance capital projects. It is also useful for examining the effect of changes in the economic base of various revenues sources available to a city. The effect of different rates of growth in the assessed value of real estate on the revenue produced by the property tax can be examined with greater accuracy when an analysis has been made of historical trends.

There are several tools available which may be used for forecasting revenues and expenditures. Forecasting techniques may be grouped into three broad categories on the basis of complexity and sophistication:

- Judgemental Approach. Using the judgemental approach, the financial analyst compiles historical data, makes some assumptions about the rate of change of the various sources of revenue and objects of expenditure, and constructs his forecasts.

The analyst employs his judgment, to ensure that the assumptions are reasonable in view of likely future events. The analyst must adjust his forecast to reflect a major residential development that is being planned, or the renovation of city offices, to cite two examples.

The judgmental approach has two major strengths. First, it is straight forward. The analysis need not be extremely complex. While this may increase the possibility of error, the objective here is to arrive at reasonable estimates. A certain amount of error will not destroy the usefulness of the forecast. Second, the approach does not require extensive facilities to perform mathematical manipulations or expertise in interpreting the results of the manipulations. Cities can begin forecasting without arranging for these facilities.

- Statistical Approach. There are several statistical methods available which may be used to forecast revenues and expenditures. Regression analysis can be used to examine, for example, the trend of property tax over time and the effect of population increases on expenditures for public safety. Statistical analysis may be more precise than judgmental analysis.

  However, this approach requires more time, expertise, and facilities than many cities can be expected to possess. The mathematical calculations usually require computer facilities. Accomplishing the calculations by hand requires more time than city officials would be willing, or should, spend.

- Econometric Analysis. This approach is similar to the Statistical Approach. Revenues and expenditures are a function of the economic activity within a community. Econometric models can be constructed which recognize the economic forces which affect city finances. The disadvantages of this approach are the same as those for the statistical approach. In addition, there is little data available. Accurate estimates of personal income, which may be used as a proxy for economic growth are not readily available for individual cities.

Given the resources currently available, then, the judgmental approach is the one that local governments should use. This is not to say that an effort would not be wisely spent to develop the information and facilities needed for the statistical or econometric methods. A regional body may find it useful to explore the possibility of developing the resources for the more sophisticated methods. This effort could produce two benefits. First, the municipal officials would be able to do a better job of analyzing their financial resources. Second, the regional body could analyze municipal financial resources on a regional basis, assuming that there is consistency in financial statements.

In any case, the judgmental approach is appropriate for the present. An example of the methodology follows, using a hypothetical community to illustrate the technique. Although the figures used are hypothetical, an attempt was made to make them as realistic as possible.

The financial analysis methodology is divided into three steps:

- First, historical revenue patterns are analyzed and a forecast of annual recurring revenues is made.
- Second, historical expenditure patterns are analyzed and a forecast of annual recurring expenditures is made.
- Finally, the forecast revenue and expenditure figures are compared. The difference represents expected financial capacity available for major capital expenditures. This will be useful in analyzing alternative financial plans for capital expenditures. A decision can be made regarding the sources of funds, whether debt or tax revenue, for individual projects within the municipality's capital program.

II. ANALYSIS OF REVENUE

Both revenue analysis and expenditure analysis require the compilation of historical data. City reports can provide most of the data necessary. It is recommended that a ten year history of revenues and expenditures be collected. The historical information will be used as a base on which projections will be made.

Sources of Revenue

The first task is to group recurring revenue sources into a few categories. Some care must be taken in defining the categories to assure that the individual sources within the categories tend to change at similar rates over time. Care must also be taken to assure that the categories are consistent for the historical period. Adjustments will have to be made for changes in account classifications. Unless the adjustments are made, the forecast will be less accurate.

The revenue history of the hypothetical case is shown in Figure C-1. The categories used are typical of those that might be used in many cities. Once the various sources of revenue have been identified and a historical perspective has been prepared, each of the sources must be analyzed so that a prediction may be made.

SOURCES OF REVENUE
($000's)

FIGURE C-1

Year	Property Tax	Other Taxes	Gov't Aid	License & Fees	Other	Total Revenue
1	$ 4,560	$ 720	$ 2,360	$ 56	$ 304	$ 8,000
2	5,137	780	2,570	60	384	8,931
3	5,368	830	2,810	66	470	9,544
4	5,679	900	3,000	69	545	10,193
5	6,528	937	3,100	71	625	11,261
6	7,535	952	3,650	75	700	12,912
7	7,868	985	4,000	80	790	13,723
8	8,110	1,030	4,310	85	870	14,405
9	8,358	1,072	4,690	90	945	15,155
10	8,638	1,120	5,120	96	1,026	16,000

Property Tax

The property tax analysis requires special attention since it is the major source of revenue for most municipalities. The total revenue from property tax should not be overemphasized. The growth in the property tax base, assessed valuation, should be of greater concern. It is important to make adjustments for any change in the assessment ratio which may have occurred. The assumption is made in the hypothetical case that the assessed valuations are 100% of market value.

After the assessed valuation figures are corrected for any changes in assessment ratio, the growth in assessed valuation can be determined. The overall growth rate from year 1 to year 10 is a little over 6% per year (See Figure C-2). A revaluation occurred, however, in year 6 which tends to increase the growth rate. For that reason, the growth rate from year 6 to 10 is determined. This rate, 3% per year, is used to forecast future assessed valuations. The analyst should, of course, consider any major developments that will affect future assessed valuations and modify the forecasting figures accordingly.

One of the objectives of the analysis is to determine the amount of increase in the tax rate, if any, that will be required to finance future capital investments. For that reason the present tax rate of $70 per $1,000 of assessed valuation will be held constant. Multiplying the tax rate by the forecasted assessed valuation will give the total property tax levy for each year of the forecast period. Each annual figure is reduced by the average collection percentage which is derived from the collection percentage experience during the past ten years. The result is the forecasted revenue from property tax for each year of the forecast period.

PROPERTY TAX REVENUE
(000's)

FIGURE C-2

Year	Assessed Valuation	Growth Rate*	Tax Mills	Collection Percentage	Property Tax Revenue
1	$ 72,335	-	64	98.5	$4,560
2	74,127	2.5	70	99.0	5,137
3	77,944	5.1	71	97.0	5,368
4	78,640	0.9	73	98.9	5,679
5	81,000	3.0	81	99.5	6,528
6	110,306	36.2	69	99.0	7,535
7	113,535	2.9	70	99.0	7,868
8	117,614	3.6	70	98.5	8,110
9	120,606	2.5	70	99.0	8,358
10	124,646	3.3	70	99.0	8,638
11	128,385	3.0	70	98.7	8,870
12	132,236	3.0	70	98.7	9,136
13	136,204	3.0	70	98.7	9,410
14	140,290	3.0	70	98.7	9,693
15	144,498	3.0	70	98.7	9,983
16	148,833	3.0	70	98.7	10,283

* Annual percentage increase in assessed valuation.

Other Taxes

The historical pattern of revenues from other taxes, which might include the municipality's share of state sales taxes, excise taxes, etc., show an upward trend but seem to be growing by a constant dollar amount per year rather than by a constant percentage per year. The average amount of increase per year is used to forecast revenues from other taxes. Again, the analyst should consider expected new taxes, or changes to existing taxes, and modify the forecast as necessary. It is assumed here that the pattern of revenue from other taxes will continue into the forecast period.

Licenses and Fees and Other Non-Tax Revenue

The same kind of pattern is noted both with respect to revenue from licenses and fees, and with other revenues. Licenses and fees seem to be growing at about $5,000 per year, while other revenues seem to be growing at $80,000 per year.

Government Aid

Revenue from government aid, which might include federal grants, revenue sharing, and state aid other than disbursements of tax revenue, seems to be growing dramatically. It is difficult to forecast, with a great deal of confidence, the likely future of government aid to municipalities. The amount of available funds depends on the results of the legislative process at the federal and state level. It seems to be true, however, that the portion of revenue at the local level that is attributable to governmental aid has increased in the past. Government aid is a larger portion of total revenue in year 10 than in year 1. The growth rate is about 9%. If it is assumed that the municipal officials in the hypothetical case will continue to seek aid from state and federal sources, then a continuation of the 9% growth rate can be justified, at least for the purposes of this analysis.

Long-term Debt

Long-term debt has not been included as a source of revenue. The analysis is intended to produce a measure of financial capacity, or the difference between expected recurring revenues and expected recurring expenditures. The analysis is, in essence, a cash flow projection. It will help to determine how much debt the municipality can be expected to require in the future to finance capital projects. For this reason, debt as a source of funds has been excluded. Debt service charges, since they are recurring and will continue into the future, will be dealt with in the expenditure projections.

Revenue Forecasts

Total revenue is not projected directly. Major categories of total revenue are forecast and then added for each year to arrive at total revenue projections. There are three reasons for this. First, analysis of individual categories of revenue may reveal trends that can be useful in establishing financial policy. Second, any errors in forecasting one category of revenue may be offset by errors in another category. For example, an overestimate of the revenue from licenses and fees may be offset by an underestimate of revenue from government aid. And thirdly, more sophisticated methods may be applied to any individual category as more advanced projection techniques become feasible.

The forecasted revenues are shown in Figure C-3.

FORECAST REVENUES
($000's)

FIGURE C-3

Year	Property Tax[1]	Other Taxes[2]	Gov't Aid[3]	License & Fees[4]	Other[5]	Total Revenue
11	$ 8,870	$ 1,165	$ 5,581	$ 101	$ 1,106	$16,823
12	9,136	1,210	6,083	106	1,186	17,721
13	9,410	1,255	6,630	111	1,266	18,672
14	9,693	1,300	7,227	116	1,346	19,682
15	9,983	1,345	7,878	121	1,426	20,753
16	10,283	1,390	8,587	126	1,506	21,892

[1] See Figure C-2
[2] Assumed to grow by $45,000 per year
[3] Assumed to grow at the rate of 9% per year
[4] Assumed to grow by $5,000 per year
[5] Assumed to grow by $80,000 per year

III. ANALYSIS OF EXPENDITURES

Categories of Expenditures

As with revenues, the first task in analyzing expenditures is to define major categories of expenditure which are consistent over time. Care must be taken to assure that the figures are adjusted for any changes in account classifications. Unless the categories are consistent over time, unnecessary error will be introduced. As with revenue, the analyst should be concerned with recurring expenses The accounts should be reviewed carefully. Any non-recurrent capital expenditures should be subtracted out so that only those expenses which can be expected to continue remain.

The categories of expenditure used in the hypothetical case are illustrative only and do not necessarily fit all situations as with revenue categories. Expenditure categories should include objects of expenditure which tend to increase or decrease at similar rates.

It is not recommended that adjustments be made to the forecasted expenditures to reflect price level changes. It is difficult to forecast price level changes even with the most sophisticated techniques. Also, past price level changes will be included in the historical figures so that the forecast will be influenced by historical price level trends.

Historical Patterns

Figure C-4 shows the ten year history of expenditure patterns for the hypothetical community. Expenditures for public safety, public works, and public education all show strong upward trends with an increasing dollar amount per year. The overall rates of growth for the ten year period are:

Public Safety	7.2%
Public Works	6.4
Public Education	9.0

These rates have been used to forecast expenditures in each of the three categories. The analyst should consider any possible changes to rates of growth and make changes in the forecast as necessary. It may be, for example, that public works expenditures can be expected to increase due to a recent decision to expand the public works staff. Adjustments to the forecast should be made to replace expected changes which do not show up in the historical figures.

EXPENDITURE PATTERNS
($000's)

FIGURE C-4

Year	Public Safety	Public Works	Public Educ	Other	Total Operating Costs	Debt Services	Total Expen
1	$ 700	$ 840	$ 4,180	$ 1,580	$ 7,300	$ 700	$ 8,000
2	760	890	4,195	1,600	7,445	1,486	8,931
3	810	952	4,580	1,615	7,957	1,587	9,544
4	865	1,012	4,985	1,635	8,497	1,696	10,193
5	925	1,075	5,430	1,660	9,090	2,171	11,261
6	990	1,146	5,923	1,681	9,740	3,172	12,912
7	1,065	1,220	6,456	1,699	10,440	3,283	13,723
8	1,140	1,290	7,037	1,730	11,197	3,208	14,405
9	1,220	1,380	7,670	1,770	12,020	3,135	15,155
10	1,308	1,468	8,361	1,776	12,913	3,087	16,000

The "Other" category seems to be growing by a constant dollar amount per year. The average dollar amount, $20,000 per year, is used to forecast expenditures for the forecast period.

Most municipalities will want to divide their expenditures into more categories than are shown in the hypothetical case. In general, however, the process would be the same. As with revenue projection, total operating expenditures are forecast by summing the projected expenditures for each category. In this way, overestimates in one category of expenditure may be offset by underestimates in another category, thus reducing the error in the forecast of total expenditures.

Debt Service

Debt service is also a recurring expense. The amounts necessary to cover principal and interest obligations should be computed for each year of the forecast period. The terms of each bond issue should be reviewed to determine the annual cash outlay required to service each issue. By summing the cash requirements for all bond issues, the analyst can determine total debt service expenditures for each year of the forecast period.

The assumption is made, at least initially, that there will be no new bond issues during the forecast period. As stated previously, the objective of the analysis is to determine the municipality's financial resources so that alternative financial strategies can be tested. The size and timing of bond issues will be considered once the financial resources are estimated.

The issue of short term debt service changes remains to be considered. Interest rates tend to change over time, so the analyst may wish to average the annual interest cost of short term debt over the ten year historical period and add the average to the long term debt service charges. Of course, if short term interest charges are not significant, they may be ignored. In general, only those debt service charges which can reasonably be expected to continue into the future should be forecast.

Expenditure Forecasts

Figure C-5 shows the projected expenditure figures. These figures, together with the projected revenue figures, may be used to determine the expected future financial capacity of the municipality.

FORECAST EXPENDITURES
($000's)

FIGURE C-5

Year	Public Safety[1]	Public Works[2]	Public Educ[3]	Other[4]	Total Operating Costs	Debt Service[5]	Total Expen.
1	$ 1,402	$ 1,562	$ 9,113	$ 1,796	$13,873	$ 2,737	$16,610
2	1,503	1,662	9,933	1,816	14,914	2,543	17,457
3	1,611	1,768	10,827	1,836	16,042	2,346	18,388
4	1,727	1,881	11,802	1,856	17,266	2,001	19,267
5	1,851	2,001	12,864	1,876	18,592	1,597	20,189
6	1,985	2,130	14,022	1,896	20,033	1,500	21,533

[1]Assumed to grow at the rate of 7.2% per year
[2]Assumed to grow at the rate of 6.4% per year
[3]Assumed to grow at the rate of 9.0% per year
[4]Assumed to grow by $20,000 per year
[5]Derived from analysis of outstanding debt

IV. DETERMINATION OF GROWTH RATES

The forecasting technique used requires a determination of the rate of growth of expenditures, revenues, and assessed valuation. In the hypothetical case, a percentage rate was used to forecast some categories of revenue and expense, while a constant dollar amount was used in other categories. The easiest way to determine the growth pattern is to look at the dollar amount of change, or first difference, from one year to the next.

Consider, for example, two cases. In year 0, both cases, which may be either revenues or expenditures, show $100. In year 5, both cases show $150. While it appears, at first glance, that the rate of growth is the same, an examination of the experience between year 0

Year	Case A	Case B
0	100	100
5	150	150

and year 5 shows that the rate of growth is not the same. The annual figures are shown in Figure C-6.

ANNUAL CHANGE BY
DOLLAR AMOUNT AND PERCENTAGE

FIGURE C-6

	CASE A			CASE B		
Year	Amount	First Diff	% Change	Amount	First Diff	% Change
0	100	-	-	100.0	-	-
1	110	10	10.0	108.5	8.5	8.5
2	120	10	9.1	117.7	9.2	8.5
3	130	10	8.3	127.7	10.0	8.5
4	140	10	7.7	136.6	10.9	8.5
5	150	10	7.1	150.0	11.4	8.2

It is clear that in Case A, the dollar change every year is a constant amount, which gives a reducing percentage change. In Case B, however, the annual percentage change is constant, giving an increasing dollar change each year.

It is recommended that whichever proves to be the constant factor, either the dollar change or the percentage change, should be used in making any projections. If neither is constant, it becomes a matter of judgment to use an average dollar change or average percentage change.

If the analyst determines that a set of figures is growing by a percentage rate, and the percentage growth from year to year is unstable, he may wish to use a present value table to determine a rate of growth over a period of years. Present value tables are usually included in accounting, finance, and real estate textbooks.

V. DETERMINATION OF NET CASH FLOW

Net Cash Flow

It is now possible to develop estimates of future net cash flows that will be available to the municipality. Figure C-7 shows how these estimates are derived. In the first row, the estimated revenues for each of the forecast years is entered. The estimated operating costs for each year are subtracted from estimated revenues. The result, gross cash flow, is shown in the third row. From this, the annual debt service charge, shown in row 4, is subtracted. The result represents an estimate of the net cash flow, shown in row 5, that the municipality will have to finance new expenditures, such as capital projects.

Financial Analysis

The net cash flow figure represents an estimate of the amount of funds that the municipality will be able to generate, after covering the recurring operating and debt service costs, and apply to capital projects. The analyst is now in a position to evaluate the timing of capital expenditures from a financial point of view. In addition, the analyst can consider alternative methods of financing the capital expenditures once the timing has been determined.

NET CASH FLOW
($000's)

FIGURE C-7

	YEAR					
	11	12	13	14	15	16
1. Operating Revenue	$16,823	$17,721	$18,672	$19,682	$20,753	$21,892
2. Operating Expenditures	13,873	14,914	16,042	17,266	18,592	20,033
3. Gross Cash Flow	2,950	2,807	2,630	2,416	2,161	1,859
4. Less Debt Service	2,737	2,543	2,346	2,001	1,597	1,500
5. Net Cash Flow	213	264	284	415	564	359
6. Proposed New Capital Projects	100	500	1,000	100	750	600
7. New Financing Required*	(113)	236	716	(315)	186	241

* Parentheses indicate surplus

In row 6, a hypothetical schedule of capital expenditures is shown. These figures represent the amounts necessary to pay for the proposed capital projects less any grants from other sources. These figures may be taken from the municipality's capital program as it progresses through the capital programming process. By subtracting the amount of funds necessary for the capital program from the net cash flow, the analyst can estimate the amount of new financing required for each year. The analyst is now able to measure the effects on the tax rate of various levels of debt financing for the capital expenditures.

VI. ANALYSIS OF FUNDS SOURCES

With an estimate of net cash flows, the analyst is in a position to evaluate the effects of different levels of debt and appropriations

from current revenues to finance the capital program. Two alternatives are presented to illustrate the technique. One alternative is to finance the capital program entirely from current revenues. The second alternative is to finance all capital projects by floating bonds. Figures C-8, C-9, and C-10 show how an estimated tax rate may be computed under each financing plan. Other possible financing alternatives are explained in Appendix D.

Current Revenue Financing

In Figure C-8, the amount of revenue that can be expected from each one dollar increase on the tax rate is computed. Using this information, an estimate of the increase in tax rate required can be made. The result of this computation is shown in Row 3 of Figure C-9.

In Row 1 of Figure C-9, the net new financing requirements are shown. These figures are taken from Figure C-7. In Row 2, the figures are adjusted to reflect surpluses carried over from year 11 to year 12, and from year 14 to years 15 and 16. The figures in Row 2 represent the amount needed to finance operating costs and capital projects.

An estimate of the total tax rate required may be obtained by adding the increase in the tax rate to the base tax rate of $70.00 per thousand. The total tax rate estimates are shown in Row 5 of Figure C-9. The analysis indicates that a rather large increase in the tax rate in year 13 would be necessary if operating expenses and capital projects were financed by current revenues.

REVENUE FOR ADDITIONAL MILL — FIGURE C-8

Year	Assessed Value	Collection Percentage	Revenue Per Additional Mill
11	$128,385,000	98.7	$126,716
12	132,236,000	98.7	130,517
13	136,204,000	98.7	134,433
14	140,290,000	98.7	138,466
15	144,498,000	98.7	142,620
16	148,833,000	98.7	146,898

CURRENT REVENUE FINANCING
($000's)

FIGURE C-9

	YEAR					
	11	12	13	14	15	16
1. Net New Financing Required (See Figure C-7, Parenthesis indicate surplus)	$(113)	$ 236	$ 716	($315)	$ 186	$ 241
2. Adjusted for carry-over of surplus	$ 0	$ 123	$ 716	$ 0	$(129)	$ 112
3. Additional mills required (nearest tenth)	0	1.0	5.4	0	0	0.8
4. Revenue increase (approximate)	-	$ 131	$ 726	-	-	$ 118
5. Total Tax Rate (Mills)	70.00	71.00	75.40	70.00	70.00	70.80

Debt Financing

The analyst may also wish to examine the effect of using long term bonds to cover the expected financial requirements. The financing requirement is again adjusted for any carry-overs of surplus funds as before. The adjusted figures from Row 2, Figure C-9, also appear in Figure C-10.

Rows 2 and 3 in Figure C-10 show the principal and interest payments necessary, assuming all the bonds are amortized over 15 years and the interest rate 6%. Row 4 shows the total debt service on the new bonds. The hypothetical community will be able to cover operating costs with current revenues. In Row 5, then, zeros are entered to indicate that no tax increases will be necessary to cover operating costs. Many communities may find that this circumstance does not apply to them.

DEBT FINANCING
(000's)

FIGURE C-10

	YEAR					
	11	12	13	14	15	16
1. Debt required for capital program	0	123	716	-	-	112
2. Amortization of Debt Principal (15 year issues, accumulating)	0	8	56	56	56	63
3. Interest (6% on outstanding balance)	0	7	50	46	43	45
4. Debt service	0	15	106	102	99	108
5. Funds needed for increases in operating costs	0	0	0	0	0	0
6. Total new revenue requirements	0	15	106	102	99	108
7. Additional mills required (nearest tenth)	0	0.2	0.8	0.8	0.7	0.8
8. Revenue increase (approximate)	0	26	107	111	100	117
9. Total Tax Rate (Mills)	70.00	70.20	70.80	70.80	70.70	70.80

Row 6, obtained by adding Rows 4 and 5, gives the total new revenue requirements to be covered by current revenues. The increases in the tax rate is computed in the same manner as before.

Choice of Alternatives

The tax rate, assuming 100% debt financing, is more stable than in the current revenue alternative. The authorities responsible for evaluating the capital program are now able to assess the impact of various financing plans on the tax rate. Various proportions of debt and current revenue financing can be analyzed using the technique outlined above.

Obviously, the hypothetical example is simplified so that the technique can be seen. The object of the analysis is to develop estimates of future financial conditions. The analyst may wish to make assumptions which simplify his task without making the estimates unrealistic. This is a matter of judgment and, with experience, the analyst will be able to sharpen his skills in dealing with the analysis.

Finally, it should be remembered that the results of financial analysis are only one input to the decision making process. It is an important input, nevertheless, and no capital improvement program can be entirely successful without it.

ALTERNATIVE FINANCING METHODS

INTRODUCTION

Once the projections of revenues and expenditures are made, and the projected fiscal policy is determined, an analysis of available financing alternatives should be undertaken. The following descriptions may help to identify the advantages and constraints of various methods.

These descriptions are provided as general statements to serve as an introduction to financing capital improvements. Additional information on the various financing techniques is available from a variety of sources.

CURRENT REVENUE FINANCING (PAY-AS-YOU-GO)

Pay-as-you-go is the financing of improvements from current revenues. Such revenues may come from general taxation, fees, service charges, special funds, or special assessments.

Advantages

- The savings of interest costs on borrowed money. Greater future budget flexibility.

Disadvantages

- In a small community, it may be difficult to accumulate a substantial amount of cash which is available for capital expenditures. Some cities have done this effectively by cutting down the bonding amounts, and gradually financing capital improvements from the yearly operating budget.

- Pay-as-you-go may cause inequities between age groups or generations. A project that gives service over many years should be paid for by people according to their use; in other words, an aged person should pay less of the cost of a new project than a younger person. An elderly person who came to live in a town which soon after raised taxes for pay-as-you-go major capital improvements, could be treated inequitably. The life of the improvements may be a great deal longer than his life

expectancy. A young family who moved into town after the completion of payments for major capital improvements that they use for many years, would also create an inequitable situation for the other town residents.

RESERVE FUNDS

Reserve Fund financing is a variation of the pay-as-you-go method. Under this procedure, funds are accumulated in advance for the construction of capital projects. The accumulation may result from surplus or "earmarked" operational revenues that are set aside, depreciation accounts, or from the sale of capital assets.

Advantages

- In small municipalities, where large capital improvements do not occur often, the method can be used to advantage. Securing a good manager for the investment of the reserve funds is important, however.

Disadvantages

- The interest from investments of the reserve fund, unless it is well managed, may not equal the percentage of value lost because of inflation in the years during accumulation of the funds.

GENERAL OBLIGATION BONDS

Projects providing communitywide benefits may be financed by general obligation bonds. Through this method the taxing power of the jurisdiction is pledged to pay interest upon and retire the debt. General obligation bonds can be sold to finance permanent types of improvements such as schools, municipal buildings, parks, and recreation facilities. General obligation bonds may require the approval of the electorate and are issued as either sinking fund or, more commonly, serial bonds.

REVENUE BONDS

Revenue bonds frequently are sold for such projects as water and sewerage systems, stadiums, swimming pools, airports, and other revenue-producing facilities. Such bonds usually are not included in State-imposed debt limits, as are general obligation bonds, because they are not backed by the full faith and credit of the local jurisdiction. For this same reason, interest rates are almost always higher than are general obligation bond interest

rates and voter approval is seldom required. However, care must be taken to assure that estimated net earnings of new facilities are realistic.

Advantages

- Voter approval of a referendum for revenue bonds is usually easier to obtain than for tax bonds.
- The users of the facility pay for the facility.
- Some needed improvements may still be undertaken, even if the locality is over its legal debt or taxing limit as applied to ad valorem taxes.

Disadvantages

- Revenues for the facility are not realized until the facility is in operation. For example, a large highway and bridge facility accrues little or no revenue for several years after construction begins.
- Higher interest costs.
- The debt incurred still must be counted as obligations of the local taxpayers as a practical matter when analyzing community financial obligations.

LEASE-PURCHASE

Local governments utilizing the lease-purchase method prepare specifications for a needed public works project and take steps to have it constructed by a private company or authority. The facility is then leased by the municipality at an annual or monthly rental. At the end of the lease period, the title to the facility can be conveyed to the municipality without any future payments. The rental over the years will have paid the total original cost plus interest. Localities in some States have used this method to avoid the necessity of calling bond elections or to avoid debt limits. This type of financing has sometimes proved to be excessively costly. In addition, its legality has been questioned in some States; in others the obligation is considered as part of the municipal debt. This method has been used successfully in park-land purchases.

AUTHORITIES AND SPECIAL DISTRICTS

Authorities and special districts are created in most cases to manage facilities that are supported by user charges. Toll roads and water and sewerage systems are examples of such facilities. Special districts with power to tax are also created for the purpose of issuing bonds and constructing facilities that may not be self-supporting. Sometimes they are necessary to avoid restrictive debt limits. The authority device may offer a convenient method of financing interjurisdictional facilities; however, its use also creates many problems. Chief among these is the scattering of governmental responsibility. Moreover, it must be remembered that the debt incurred by an authority or special district is still a part of a community's total financial obligation even where it is not counted in the debt limit of a general purpose government.

SPECIAL ASSESSMENTS

Public works programs financed most equitably by special assessments are those that benefit certain properties more than others. Local improvements often financed by this method include street paving, sanitary sewers, and water mains.

Advantages
- The users of an improvement pay for it.

Disadvantages
- A a matter of equity, the provision of street improvements, lights, and water and sewers indirectly benefit all of the residents of a city, since general health, safety, and mobility for all tend to be assured.

JOINT FINANCING

The proposed program might be surveyed to determine whether certain projects are equally beneficial to other governmental agencies, authorities, or special districts and if joint financing can be arranged. Such cooperation may bring about projects that would otherwise have to be deferred for many years and thus can result in better service and lower costs for the area. In addition, localities may also enter into contracts with each other for the provision of various public services. These arrangements may substantially alter the financing of public improvements.

Advantages

- The financing of improvements may be substantially strengthened when more than one local government is involved.
- The tax burden might be more equitably distributed, and lighter upon taxpayers.

Disadvantages

- Harmonious relationships and firm agreements are necessary - a condition sometimes difficult to obtain in intergovernmental relationships.

OUTSIDE SOURCES (PRIVATE GIFTS)

The possibility of obtaining private gifts for certain facilities--parks, community centers, or libraries--from individuals, corporations, and foundations should also be explored. Before defining what projects should be provided by the Government, an effort should be made to discover if some nonpublic group can provide a service or parts of a needed program. For example, private groups or business leaders may be persuaded to build offstreet parking structures or provide lots if the local government has insufficient funds. Civic associations have provided parks and playgrounds in many communities. It is sometimes to the advantage of some individuals, corporations, and foundations to make such gifts. The difficult part may be in securing funds for the operation and maintenance of the facility, or in meeting the continuing obligations that are tied to the gift.

OUTSIDE SOURCES (STATE AND FEDERAL AID)

State and Federal grants-in-aid programs are frequently available to plan, construct, and finance capital improvements, such as water and sewer facilities, airport development, transportation and mass transit improvements, open space and recreational facilities, neighborhood multi-purpose centers, historic preservation of sites and structures, urban beautification, and housing programs. The best catalogue of federal aids is the current edition of the Catalog of Federal Domestic Assistance, Executive Office of the President, Office of Management and Budget. Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

Advantages

- Federal aids may help a community that has reached its debt and taxing limits.
- Almost all the residents of a local area pay federal taxes in one form or another. The

use of federal aid is one way a community can receive in turn "its fair share" of federal benefits.

Disadvantages

- There are over 1,000 federal aid programs. Choosing the "right" program may be difficult for a small locality.

- The large amounts of monies available in some federal programs may distort a locality's true priorities. For example, a city may really desire and need a new water treatment plant. However, there may be federal money available only for highways, not for water facilities. The city's choices are thus limited.

- Federal funds are subject to federal scheduling and allocation decisions. The timing of local capital projects must fit federal deadlines.

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